2003

CPA expert 2002 fall

American Institute of Certified Public Accountants

CPA EXPERT

AICPA Newsletter for Providers of Business Valuation & Litigation Services

Fall 2002

Contents

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PUNITIVE DAMAGES: A FRAMEWORK FOR THE FINANCIAL EXPERT

Helping Triers of Fact Reach an Informed Decision

Marilee Hopkins, CPA

The job of the financial expert is to bring rationality to the irrational, says the Honorable Judge Sheldon Gardner, Circuit Court of Cook County, Illinois. Nowhere is this more evident than in the area of punitive damages. Recently, a jury awarded $145 billion against the tobacco industry, and in another case, a jury determined that a punitive award of 1,000 times the compensatory damages was just.

For financial experts, experienced in the analysis and determination of actual damages, assisting the trier of fact with opinions in punitive damages matters can be another world. Many legal opinions, legal commentaries, and litigation services practice aids guide the expert in the calculation of actual damages. Little guidance is available, however, for experts who have much to offer the court (Judge Gardner would suggest because little is known about the meaning of punitives). Such assistance ultimately serves to protect a defendant from an unreasonable punitive damages award or give assurance to the court that the award is rational.

Before considering guidance to the expert in formulating his or her opinion, let's consider first the legal framework for determining punitive damages. According to *Black's Law Dictionary*:

Compensatory damages are such as will compensate the injured party for the injury sustained, and nothing more; such as will simply make good or replace the loss caused by the wrong or injury. Damages awarded to a person as compensation, indemnity, or restitution for harm sustained by him. The rationale behind compensatory damages is to restore the injured party to the position he or she was in prior to the injury.

Exemplary or punitive damages are damages on an increased scale, awarded to the plaintiff over and above what will barely compensate him for his property loss, where the wrong done to him was aggravated by circumstances of violence, oppression, malice, fraud, or wanton and wicked conduct on the part of the defendant, and are intended to solace the plaintiff for mental anguish, laceration of his feelings, shame, degradation, or other aggravations of the original wrong, or else to punish the defendant for his evil behavior or to make an example of him for which reason they are also called "punitive" or "punitory" damages or "vindictive" damages. Unlike compensatory or actual damages, punitive or exemplary damages are based upon an entirely different public policy consideration—that of punishing the defendant or of setting an example for similar wrongdoers, as above noted. In cases in which it is proved that a defendant has acted willfully, maliciously, or fraudulently, a plaintiff may be awarded exemplary damages in addition to compensatory or actual damages.

GOVERNING LAW

All damages[1] constitute compensation for an injury or wrong sustained, either under laws of contract or tort (a common law violation) and always within the definitions of the applicable legal jurisdiction. Compensatory damages are awarded under either contracts or torts and may require the expert, after consultation with counsel, to apply different methodologies or presentations. Some examples of these differences include the use of historical operating results rather than prospective financial information, the application of interest and present values, and consideration of income tax. Only under tort law, however, can a plaintiff claim punitive damages.

Further, the appeal of an award of punitive damages assessed by a jury constitutionally requires a *de novo* standard of review (*Cooper Industries Inc.* v. *Leatherman Tool Group, Inc.*[2]). The cases cited in this article demonstrate that, because the punitive damages frequently bear some relationship to the compensatory damages, to the extent that the expert is providing opinion testimony related to the award of compensatory damages, the judiciary may also be obligated to critically review the expert's compensatory damages opinion. Further, if the jury relies on the expert's opinion, a judicial review of the opinion is mandatory.

CALCULATING COMPENSATORY DAMAGES

The financial expert generally calculates compensatory damages under one of the following methodologies:

- *Decline in value:* the value of an item before the event giving rise to the action, less the value after the event.
- *Lost profits:* the incremental profits that would have been earned during the damage period less the incremental profits actually earned.
- *Costs:* either the increased cost of an item multiplied by the number of items acquired or the out of pocket costs incurred as a result of the event giving rise to the action.

With few exceptions (the area of intellectual property damages being one), the application of these methodologies and the resultant calculation focus on the plaintiff, the injured party. The objective of an expert's analysis and opinion, whether the expert is retained by the attorney for the plaintiff or defendant, is to determine the amount of economic loss the plaintiff suffered. Although the expert may offer an opinion as an estimate or a range, or merely evaluate the work of another, the expert is assisting the trier of fact to determine a fact at issue, which is the specific amount of economic loss. In a perfect world, the injured party would receive the amount determined by the expert and proceed as if the event had never occurred.

As noted above, the purpose of a punitive damages award is to punish the defendant for the wrongful conduct and to deter future misdeeds. This purpose shifts the focus of the expert completely from the injured party to the defendant, the party found to have caused the injury. Unlike the amount of a theft, which in many cases can be calculated exactly, the amount that would deter a party from acting again in a similar manner cannot be determined exactly. Consequently, the expert must provide assistance by providing facts that the judiciary can use to frame, limit, or otherwise assess the award. Only the jury can decide what amount is sufficient to punish and deter, and the judiciary in review can determine if the jury's award is reasonable based on constitutional limits.

The constitutional limits, as set out in *BMW of North America, Inc.* v. *Gore,* provide that the award—

1. Must be commensurate with the degree of reprehensibility of the defendant.
2. Cannot exceed the defendant's ability to pay the award and cannot cause substantial damage or destruction of its business.
3. Must bear a reasonable relationship to the actual harm.

An expert can particularly provide assistance to the court by rendering opinions regarding the defendant's ability to pay, the actual

1 Damages assessed by statute, such as those under anti-trust laws, the Lanham Act, and the like, are excluded from consideration in this article.

2 All cases referenced in this article in addition to other informative cases relevant to punitive damages are cited in the schedule on page 3.

CPA Expert, Fall 2002, Volume 8, Number 2. Published by the American Institute of Certified Public Accountants. Harborside Financial Center, 201 Plaza Three, Jersey City, N.J. 07311-3881. Printed in the U.S.A. Subscription rates: $76 a year; for AICPA members, $72; for members of the AICPA CS Section, $36. To order call 888-777-7077. *CPA Expert* is designed to provide timely nonauthoritative information only. It does not provide legal advice. The views of the authors and editors are their own, not those of the AICPA.

Schedule of Punitive Damage Cases and Awards

	JURY AWARD				RESULT OF JUDICIAL REVIEW	
	Compensatory $	Punitive $	Total $	Multiple*	Compensatory $	Punitive $
Pacific Mut. Life Ins. Co. v. *Haslip* 111 S.Ct. 1032 (1991)	$200,000	$840,000	$1,040,000	4	affirmed	affirmed[1]
Zhadan v. *Downtown Los Angeles Motor Dist.* App., 161 Cal.Rptr. 225	5,260	90,000	95,260	17	affirmed	affirmed
Cooper Industries v. *Leatherman Tool* 121 S.Ct. 1678 (2001)	50,000	4,500,000	4,550,000	90	50,000	reversed/remand
BMW of North America, Inc. v. *Gore* 116 S.Ct. 1589 (1996)	4,000	4,000,000	4,004,000	1,000	4,000	reversed/remand[2]
Jonathan Woodner Co. v. *Breeden* 665 A.2d 929 (D.C.App. 1995)	965,000	15,000,000	15,965,000	16	965,000	reversed/remand
Cash v. *Beltmann North American Co., Inc.* 900 F.2d 109 (7th Cir. 1990)	250,000	137,409	387,409	1	250,000	75,000
Lipsig v. *Ramlawi* 760 So.2d 170 (Fla.App. 3 Dist. 2000)	525,000	10,000,000	10,525,000	19	525,000	reversed/remand
Arab Termite and Pest Control v. *Jenkins* Fla., 409 So.2d 1039	50,000	125,000	175,000	3	reversed/remand	reversed/remand
Welty v. *Heggy* 429 N.W.2d 546 (Wis.App. 1988)	156,163	200,000	356,163	1	156,163	50,000
Fopay v. *Noveroske* 334 N.E.2d 79	27,500	20,000	47,500	1	affirmed	affirmed
Smith v. *Telophase Nat. Cremation Soc., Inc.* 471 So.2d 163 (Fla.App. 2 Dist. 1985)	250,000	1,050,000	1,300,000	4	affirmed	200,000
Wackenhut Corp. v. *Canty* Fla., 359 So.2d 430	50,000	180,000	230,000	4	affirmed	affirmed
Brown v. *Farkas* 511 N.E.2d 1143 (Ill.App. 1 Dist. 1986)	50,000	1,000,000	1,050,000	20	50,000	50,000
Owens-Corning Fiberglas Corp. v. *Ballard* 749 So.2d 483 (Fla. 1999)	1,800,000	31,000,000	32,800,000	17	affirmed	affirmed[3]
Moore v. *Missouri-Nebraska Exp., Inc.* 892 S.W.2d 6976 (Mo.App. W.D. 1994)	121,159	4,200,000	4,321,159	35	121,159	350,000[4]
George Grubbs Enterprises, Inc. v. *Bien* 900 S.W.2d 337 (Tex. 1995)	573,815	5,000,000	5,573,815	9	affirmed	reversed[5]

1 Appeal was based on due process argument.

2 A fine of $2,000 was applicable to defendant's actions.

3 The punitive award was less than 2% of defendant's net worth.

4 Uncontradicted testimony indicated that the company net worth was $460,000.

5 The trial court also awarded $222,294.49 in prejudgment interest.

* Rounded to nearest whole number.

economic harm sustained, and in certain circumstances, the reprehensibility of the defendant. Where the parties have chosen not to provide evidence as to net worth, the court will "fill in" the missing information, particularly as it relates to net worth.

In *Smith* v. *Telophase Nat. Cremation Soc., Inc.*, for example, the plaintiff, a widow, brought an action against a cremation society for the alleged intentional infliction of mental distress in connection with the failure to dispose of her husband's ashes in accordance with specific instructions. The jury awarded $1,250,000 in punitive damages. Although several legal issues were raised on appeal, the excessive nature of the punitive award is relevant here. The Court of Appeals, in examining the record, found evidence that shortly after the lawsuit was instituted, the defendant sold all of its assets, except for its land, for $900,000. Although the precise value of the land was not known, some evidence

introduced indicated it did not exceed $100,000. No evidence was introduced that the sale was other than an arm's length transaction. Accordingly, the evidence in the record available to the court indicated a value of approximately $1,000,000 (less than the award). The court therefore affirmed the trial judge's *remittitur* of $1,050,000, leaving the punitive award at either $200,000 or a new trial on the issue of punitive damages.

DEFENDANT'S ABILITY TO PAY

The CPA expert has the most to offer the court in determining the defendant's financial position, which the court can then use to support its analysis of "ability to pay without bankrupting." As in other areas of the law, the net book value (net worth) of the defendant determined in accordance with generally accepted accounting principles (GAAP) is a good place to start. Many jurors, although not accountants, are familiar with the term GAAP, like *audit*, and find it useful for relying on or analyzing financial information.

From the foundation of the GAAP net worth, the expert may consider providing pro forma financial exhibits, or adjusting the defendant's net worth by other factors that can have a significant impact on the defendant's ability to pay. Factors such as the following could be considered:

- *Goodwill or other intangible assets not reflected in the company's financial statements.* Generally, the inclusion of this information would result in a higher amount of net worth.
- *The amount of accelerated depreciation or amortization the defendant has recognized in prior years.* Generally, the consideration of this information would result in a higher amount of net worth.
- The relationship between net worth and cash flow.
- *Contingent liabilities that are not required to be recorded on a GAAP basis.* Generally, the consideration of this information would result in a lower amount of net worth.
- *Commitments, such as long-term leases.* Generally, the consideration of this information would result in a lower amount of net worth.
- *The impact of other judgments,* which naturally result in a lower amount of net worth.
- *The consideration of legally separate forms of organization.* Some courts have held that the net worth of the defendant only should be considered, without regard to subsidiaries, parents, brother-sister companies, or other related parties.
- *Fair market value.* In certain circumstances, a defendant's balance sheet, while in conformity with GAAP, may represent a real distortion of the defendant's financial resources. A valuation based on fair market value may be a better determinant of available resources with which to pay an award.

The expert should use his or her best judgment as to whether other factors would be relevant to the jury's determination. Other factors might include, for example, the impact that the payment of the award would have on the company or society, even though not bankrupting the company. For instance, a drug company might consider submitting evidence that demonstrates the payment of a punitive damages award would have a negative impact on its ability to perform research or attract capital to fund future research. Another example might be the evidence as to the spending by a defendant that a jury might consider discretionary, or amounts expended by the defendant in an attempt to cure the injury (cleanup).

PUBLIC AND PRIVATE INFORMATION

Many cases involving headline grabbing punitive awards relate to defendants that are public companies. Information related to these companies' net worth is relatively easy to obtain. In addition, information about their market value may also be readily accessible. The expert must also be able to explain market value concepts in the event that market value is introduced.

Many cases, however, relate to private companies with little financial information available to the public. Although punitive awards may only be considered when compensatory damages have been awarded, as discussed earlier, the expert is focusing on the plaintiff in determining compensatory damages. During discovery, the expert must be cognizant of, and certainly bring to the attention of counsel, the differences in the types of financial evidence needed to provide opinion testimony with respect to punitive damages.

Further, these private companies may not have financial statements prepared in conformity with GAAP or audits performed by independent accountants. In this circumstance, the expert should inquire about the financial information that is contemporaneously maintained by the defendant and the services provided by an independent accountant, if any, and proceed with requests to counsel for production of this information. The minimum financial information available to any defendant should be income tax returns. This evidence does provide some level of assurance to a jury, as the returns are subject to Internal Revenue Service audit and should have been prepared consistently from year to year.

Another case that indicates the importance of submitting or rebutting net worth testimony, particularly by the plaintiff, is *Moore* v. *Missouri-Nebraska*. Truck owners/lessors brought an action against a trucking company/lessee for breach of contract, fraudulent misrepresentation, fraudulent nondisclosure, and promissory estoppel. The jury found compensatory damages of $121,159 and a punitive award of $4,200,000, which the judge remitted to $350,000.

Without objection, or cross-examination, the defendant presented expert testimony that its net worth was $460,000. Plaintiffs presented no evidence that this amount was false or that the defendant was only a conduit of a much larger holding company. The remittitur was upheld on appeal.

DATE OF EVIDENCE

Finally, the evidence regarding a defendant's ability to pay should be as of the date of the trial or payment. This is consistent with the notion of penalizing for a prior act and deterrence, which assumes the actions will be discontinued and the economic impact of the discontinuance of the act will be reflected in the future financial performance of the defendant.

The *Jonathan Woodner Co.* v. *Breeden* appeal related to an excessive punitive damages award and the date of the evidence concerning net worth. This action was brought by tenants against landlords, seeking damages for nuisance and intentional infliction of emotional distress in connection with alleged poor housing conditions and intimidation by landlords. The landlords were attempting to convert the property from rental to condominium use. The trial court appointed a Special Master to ascertain the net worth of the Woodner Co. to guide it in setting an appropriate bond. The finding of the Special Master, which was adopted by the trial court, was that the net worth of Woodner Co., as of May, 1990, one year after trial, was $1,500,000. The punitive damage award against Woodner Co. was $9,000,000. The trial court found that any measure of net worth other than the difference between the value of the assets and liabilities of the defendants at a time reasonably close to the date of trial was "illusory." All awards of punitive damages were reversed.

RELATIONSHIP TO ACTUAL HARM

Courts interpret the constitutional limitation, the relationship to actual harm done, generally to mean either the relationship between a punitive damage award and the compensatory award or the relationship of the punitive award to available fines or other statutory penalties. The expert's role is primarily as a consultant to counsel in evaluating this factor and generally includes the compilation of information related to the actual harm done. Again, a compensatory damages opinion that can hold up well under both jury and judicial review scrutiny is an excellent yardstick. Thereafter, other evidence provided by the expert under this test may be largely arithmetic calculations used as exhibits to demonstrate the nature of the punitive award as either excessive or appropriate. Attorneys may be reluctant to use the CPA in any capacity other than a consulting capacity because they may not want to give an amount to the jury.

Generally, punitive awards that are greater than four times the compensatory award appear to have been determined on evidence other than a single plaintiff award basis. In addition to relevant case citations, the schedule on page 3 includes a calculation of the relationship between various punitive award amounts to the relevant compensatory amounts.

In *BMW of North America, Inc.* v. *Gore,* the trier of fact found a very direct relationship between the compensatory damages and the punitive damages. The punitive damages were calculated as the compensatory damages to the single plaintiff multiplied by the number of instances of the wrongful activity in Alabama. In some cases, punitive damages awards, although at high multiples of the compensatory award, still represent a very small percentage of the defendant's net worth. In the *Owens-Corning Fiberglas Corp.* v. *Ballard* award, which was affirmed, the punitive award of $31,000,000 represented a 17 times multiple, but only 1.3 percent of the Owens-Corning net worth.

DEGREE OF REPREHENSIBILITY

Evidence to support the degree of reprehensibility of a defendant's action may also be related to the actual compensatory damages assessed. In providing this assistance, the creativity and natural investigative mind of the CPA expert should be an asset in helping counsel find evidence of the actions of the parties and in developing exhibits to demonstrate the expert's findings. Factors to consider might include the following:

- Defendant's actions in mitigating the injury.
- Defendant's response to notice of the injury.
- Whether one business caused the injury to another business.
- Whether the plaintiff participated.
- Whether there were other remedies, such as fines, that could have been assessed.
- The number of incidents.

In summary, the CPA may be called on for either consulting or expert opinion assistance in any of the three areas noted above 1) the defendant's ability to pay, 2) the relationship to the actual harm, and 3) the degree of the reprehensibility of the act. However, it is most likely (and therefore of most importance to the CPA) that the CPA expert will be asked to assist in the area of the defendant's ability to pay; and thereafter, to fully and properly educate the jury on the financial condition of the defendant, so that the jury can reach an informed decision. As in opinions of compensatory damages, the expert must be a teacher to the jury, must come fully prepared, and must have based the opinion on sufficient study, analysis, and credible evidence.

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THE APV METHOD: IS IT BETTER THAN THE DCF?

Mark L. Zyla, CPA/ABV, CFA, ASA

Most valuation analysts are comfortable using the discounted cash flow (DCF) method of valuation. The DCF method simply discounts cash flows that a business or even a single project is expected to generate, back to the present at a rate of return that is commensurate with the risk of actually receiving the cash flows. The cash flow of an entire business is usually discounted back to the present at the business' weighted average cost of capital (WACC).

Using the discounted cash flow method, however, has limitations. The WACC inherently assumes the capital structure of the business will remain the same in perpetuity. But, what if the capital structure is expected to change? What if you are asked to value a highly leveraged company that is expected to reduce its debt level over time? What if the company has significant net operating loss carryovers? How does a practitioner handle these situations?

Fortunately, a useful methodology in these and many other situations is the Adjusted Present Value Method or the APV. This methodology is becoming increasingly touted by academics as superior to the DCF.[1]

The APV method has its roots in the initial financial theory proposed by Franco Modigliani and Merton Miller (M&M), who first analyzed the effects of how a firm is financed upon its value.[2] The M&M model demonstrated that, under a certain set of assumptions (no taxes or transaction costs), the value of the firm is independent of how it is financed. In other words, under these assumptions, the value of the entire business enterprise doesn't change if the weighting of debt and equity change.

Stewart Myers further expanded the M&M model by developing a model that does not have the restrictive set of assumptions of the M&M theory. Myers developed a model that separates the investment decision and the financing decision in a valuation.[3] This model expanded upon the M&M theory by taking into account that interest expense is tax deductible and this tax deductibility may create value. Myers' model has become known as the Adjusted Present Value Model.

AN EASILY UNDERSTOOD MODEL

Conceptually, the APV is relatively easy to understand. The method separates the investment decision from the financing decision by breaking the traditional DCF into two parts. The first part (the investment decision) discounts unleveraged cash flows to present at an equity rate of return. The second part (the financing decision) discounts the interest tax shield to the present value at a rate of return that reflects the risk in actually achieving these tax benefits. The two parts are then summed to derive the value of the entire enterprise.

The APV is based upon a principle of value additivity that analysts can use with valuations. The APV method is a powerful tool. The method is helpful not only to analysts in indicating the impact different financing alternatives may have on a company's value, but also to managers of businesses in determining the incremental impact of different managerial decisions, such as better working capital management or better asset management on value.[4]

The traditional DCF analysis accounts for financing effects through the use of the WACC as the discount rate. In calculating a WACC, the after-tax marginal cost of debt is weighted with the cost of equity at a static debt to equity ratio. The debt to equity ratio is usually an assumed "optimal" or "target" level of financing. Any value added through the use of debt financing is considered in the WACC by using the after tax cost of debt. While using a static debt to equity ratio is enticingly simplistic, most company's ratio of debt to equity varies greatly over time. Most company's tax rates change considerably over time, as well.

Fortunately, the APV method can handle situations in which the level of debt to equity is expected to change. Changing level of debt can be cumbersome under the DCF method of valuation, using the WACC. The APV model accomplishes changing debt levels by separating financing effects on value from the value of the operations themselves. Consequently, in situations in which capital structure is expected to change over time, the APV is a more flexible way to estimate value.

THREE STEPS TO A BETTER METHOD

The APV method is a three step process. In the first step, the "real" cash flows to the business (debt free or without any financing

1 Luehrman, T. "Using APV: A Better Tool For Valuing Operations" *Harvard Business Review* May–June 1997 Reprint Number 97306.

2 Modigliani, F. and Miller, M. "The Cost of Capital, Corporation Finance, and the Theory of Investment" *American Economic Review* June 1958, pp 261-297.

3 Myers, S. "Interactions of Corporate Financing and Investment Decisions—Implications for Capital Budgeting" *Journal of Finance* March 1976, pp 1-25.

4 Luehrman; see above.

Table 1: Peachtree Electronics Pro Forma Balance Sheets (in $'000)

	For the year ending December 31, 2003	2004	2005	2006	2007
ASSETS					
Current assets	$1,000	$1,200	$1,425	$1,600	$2,500
Net fixed assets	8,000	7,200	6,480	6,500	6,500
Other assets	1,000	1,000	1,000	1,000	1,000
Total assets	$10,000	$9,400	$8,905	$9,100	$10,000
LIABILITIES AND EQUITY					
Current liabilities	$500	$550	$675	$750	$1,250
Revolver 8.0%	1,500	1,200	800	700	300
Term loan 9.0%	6,000	5,700	4,700	3,700	3,450
Total liabilities	$8,000	$7,450	$6,175	$5,150	$5,000
EQUITY	2,000	1,950	2,730	3,950	5,000
Total liabilities & equity	$10,000	$9,400	$8,905	$9,100	$10,000
SUPPLEMENTAL DATA:					
Debt service:					
Interest paid	660	621	548	438	362
Debt repaid	—	2,000	1,400	1,100	650
Depreciation	1,000	1,100	900	300	300
CAPEX	200	300	180	320	300
Incremental working capital	—	150	100	225	300

Table 2: Peachtree Electronics Pro Forma Income Statements (in $'000)

	For the year ending December 31, 2003	2004	2005	2006	2007
EBIT	$2,000.0	$2,200.0	$2,420.0	$2,662.0	$2,928.2
Interest	660.0	621.0	548.0	438.0	362.0
EBT	1,340.0	1,579.0	1,872.0	2,224.0	2,566.2
Taxes @ 38%	509.2	600.0	711.4	845.1	975.2
Net income	830.8	979.0	1,160.6	1,378.9	1,591.0
Supplemental data:					
Depreciation	1,000	1,100	900	300	300
CAPEX	200	300	180	320	300
Incremental working capital	—	150	100	225	300

effects) are discounted to the present at the equity rate of return. This first step is the value of the operations or the investment decision assuming all equity financing. In the second step, the financing cash flows (the value added by tax shield for type and amount of debt financing of the business) is discounted to present at a risk adjusted rate of return that is commensurate with the risk of receiving the tax benefit of debt financing. In the third step, the two results are summed, which provides a conclusion of value of the entire business.

Why is the APV method better? Rather than using an assumed static debt to equity ratio as in the WACC, the APV method's second step can be used to forecast the tax shield of debt that either increases or decreases over time. In many instances, the changing level of debt represents more accurately what a company expects to happen than does the constant debt to equity ratio assumed in the WACC. Additionally, the APV method can handle the value created through the use of more unusual types of capital structures, such as those with convertible debt and debentures. Finally, since the method is additive, an analyst can reconfigure the model to estimate the impact of specific managerial decisions upon value.

A CASE IN POINT

Ted Carter, president of Peachtree Electronics, has asked you to estimate the value of his company. Carter has received an indication of interest from Big Electronics to acquire all of Peachtree's equity. As such, Carter would like you to assist him in understanding the fair market value of Peachtree.

In interviewing Carter about the current capital structure of Peachtree, you learn that Peachtree's management has a detailed plan to reduce the current level of debt over time. Carter has provided pro forma balance sheets for Peachtree (Table 1). Carter also has provided you with pro forma income statements for Peachtree for the next five years (Table 2). You notice from the pro forma balance sheets that management expects to reduce the level of debt financing from $7,500,000 in 2003 to $3,750,000 by 2007. Since management expects the ratio of debt to equity to be reduced over time, you decide to use the Adjusted Present Value method to estimate the fair market value of Peachtree's equity.

You breakdown the method into three steps:

1. Discount the base case cash flows to present value at equity rate of return.
2. Discount the tax shield to present at risk adjusted rate of return.
3. Sum the results.

The projected cash flows used in the first step of the adjusted present value are the same projections an analyst would use in a debt free cash flow analysis in a traditional DCF using the WACC as the discount rate. However, rather than

discounting the debt free cash flows to present at the WACC, under the APV method, the debt free cash flows are discounted to present at the cost of equity. For our analysis, we estimate that the cost of equity of Peachtree is 20.0% (see footnote in Table 3). The projected debt free cash flows of Peachtree discounted to present value at 20.0% is approximately $10,818,000 as presented in Table 3.

Table 3: Peachtree Electronics Pro Forma Cash Flows (in $'000)

	For the year ending December 31,					Terminal
	2003	2004	2005	2006	2007	Year[1]
EBIT	$2,000	$2,200	$2,420.0	$2,662.0	$2,928.0	
– Taxes @ 38%	760	836	919.6	1,011.6	1,112.7	
	1,240	1,364	1,500.4	1,650.4	1,815.5	
+ Depreciation	1,000	1,100	900.0	300.0	300.0	
= Cash flow from operations	2,240	2,464	2,400.4	1,950.4	2,115.5	
– Incremental working capital	—	150	100.0	225.0	300.0	
– CAPEX	200	300	180.0	320.0	300.0	
= Cash flow to equity	2,040	2,014	2,120.4	1,405.4	1,515.5	10,608.4
Period	0.5	1.5	2.5	3.5	4.5	4.5
Present value factor @ 20%[2]	0.9129	0.7607	0.6339	0.5283	0.4402	0.4402
Present value @ discount rate of 20%	1,862	1,532	1,344	742	667	4,670
Sum of present values	$10,818					

1 Long-term growth rate is 5%

2 Cost of equity (Ke) = Rf + B(Rpm - Rf) + _, Where
Rf = 7.00%
B = 1.0
RPm – Rf = 6.00%
_ = 7.00%
Ke = 7.0% + 1.0 (6.0%) +7.0% = 20.0%

The second step of the APV method involves analyzing the financing effects upon the company's value. One of the most common side effects of debt financing upon value is the tax deductibility of debt financing. The deduction of interest expense reduces taxable income. In this second step, the tax savings from interest expense projected by Peachtree's management is discounted to present value at a rate of return commensurate with the risk of actually receiving the tax benefit.

Some analysts, however, disagree about what the appropriate rate is to discount the tax shield. Some analysts argue that a rate slightly above the risk free rate may be the appropriate rate to discount the cash flows from the interest tax shield. Other analysts argue that a rate commensurate with the marginal cost of debt may be more appropriate. In the case of Peachtree, we selected a 10.0% rate. which is slightly above the marginal rate on the term loan of 9.0%. An appropriate rate to discount cash flows from the interest tax shield would reflect any additional uncertainty from changing tax rates, etc. The value added to Peachtree purely from the interest tax shield discounted at 10.0% is approximately $2,698,000, as presented in Table 4.

Summing the present value of the debt free cash flows in step one and the present value of the tax shield in step two results in the Adjusted Present Value of Peachtree. Using the APV method, you conclude that the indicated value of the business enterprise, or conversely of all the assets of Peachtree Electronics, is approximately $13,516,000. After subtracting interest bearing debt of $7,500,000, you determine that the indicated value of the equity under the APV method is $6,016,000. (See Table 5)

Table 4: Interest Tax Shield (in $'000)

	For the year ending December 31,					Terminal
	2003	2004	2005	2006	2007	Year[1]
Interest	$660.0	$621.0	$548.0	$438.0	$362.0	
x Tax rate @ 38%	250.8	236.0	208.2	166.4	137.6	2,888.8
Period	0.5	1.5	2.5	3.5	4.5	4.5
Present value factor @ 10%	0.9535	0.8668	0.7880	0.7164	0.6512	0.6512
Present value @ discount rate of 10%	239	205	164	119	90	1,881
Sum of present values	$2,698					

1 Long-term growth rate is 5%

COMPARISON WITH THE DCF METHOD

What if we estimated the value of Peachtree using traditional discount cash flow method? How does discounting debt free cash flows at the WACC compare to the value indicated under the APV method? Table 6 shows the same cash flows of Peachtree discounted to present

Table 5: Peachtree Electronics Adjusted Present Value (in $'000)

Value of operations (Table 3)	$10,818
+ Value of tax shield (Table 4)	2,698
Adjusted present value	$13,516
– Interest-bearing debt	7,500
Equity value	$6,016

value at the WACC of Peachtree, which is calculated to be 17%, as shown in Table 6. We assumed that the "target" capital structure for Peachtree in our calculation of its WACC to be 70% equity and 30% debt.[5] The present value of the projected debt free cash flows of Peachtree discounted at the WACC is $5,511,000 (Table 6).

There is almost $500,000 difference in the indicated value between both methods. Why would this be the case? Well, recall that Peachtree is reducing its level of debt from the first year of the projections to a more normal level. The difference in value is due to the higher level of tax shield reflected in the APV method as opposed to the DCF. Since management expects the level of debt to change over time, the APV method provides a better indication of the value of the equity of Peachtree, particularly for this purpose of valuation. As you can see in this example, the traditional discounted cash flow using the WACC with a static debt to equity ratio missed some of the value created through the way the business is actually financed.

SUMMING UP

The traditional discounted cash flow method wherein debt free cash flows are discounted to the present at the WACC may not be appropriate in every circumstance. The WACC assumes a static debt to equity ratio presumably at an optimal capital structure. However, many companies do not expect to have a static level of debt to equity, particularly in situations involving highly leveraged transactions. Under these types of situations, the Adjusted Present Value Method may be a better method. The APV separates the value of operations from value created or destroyed by how the company is financed. The APV may be a better tool to analyze the value of entities with unique financing because it separates the value of the operations of a business purely from the value that is created through the way the business is financed. As such, the APV can also be used as a management tool to break out the value created from specific managerial decisions.

Table 6: Peachtree Electronics Discounted Cash Flow (in $'000)

	For the year ending December 31,					Terminal
	2003	2004	2005	2006	2007	Year[1]
EBIT	$2,000	$2,200	$2,420.0	$2,662.0	$2,928.0	
– Taxes @ 38%	760	836	919.6	1,011.6	1,112.7	
	1,240	1,364	1,500.4	1,650.4	1,815.5	
+ Depreciation	1,000	1,100	900.0	300.0	300.0	
= Cash flow from operations	2,240	2,464	2,400.4	1,950.4	2,115.5	
– Incremental working capital	—	150	100.0	225.0	300.0	
– CAPEX	200	300	180.0	320.0	300.0	
= Cash flow to entity	2,040	2,014	2,120.4	1,405.4	1,515.5	13,260.5
Period	0.5	1.5	2.5	3.5	4.5	4.5
Present value factor @ 17%[2]	0.9245	0.7902	0.6754	0.5772	0.4934	0.4934
Present value @ WACC of 17%[2]	1,886	1,591	1,432	811	748	6,542
Sum of present values for enterprise	$13,011					
– Interest-bearing debt	7,500					
Equity value	$5,511					

1 Long-term growth rate is 5%

2 WACC is assumed to be
Assume: cost of equity is 21.6% x 70% = 15%
after-tax cost of debt is 9.0% x (1 – 0.38) x 30% = 2%
Weighted Average Cost of Capital (WACC): 17%

3 Cost of equity @ 70/30 equity/debt is: (Ke) = Rf + B(Rpm – Rf) + _, Where
Rf = 7.00%
B = 1.26570 (4)
RPm – Rf = 6.00%
_ = 7.00%
Ke = 7.0% + 1.2657 (6.0%) +7.0% = 21.6%

4 BL = Bu (1+[1 – t][D/E])
= 1.0 (1+[0.62] [30/70])
= 1.0 (1+ [0.62] [0.4286])
BL = 1.2657

Mark L. Zyla, CPA/ABV, CFA, ASA, is a shareholder of Atlanta-based Phillips Hitchner Group, Inc.

5 The beta in the cost of equity in the WACC is releveraged at the 70/30 equity to debt ratio to reflect the increased risk from debt financing, increasing the required return on equity. The required return on equity in this example leveraged at the "target" capital structure is 21.7%. In the APV method, the increased risk due to higher levels of debt financing is reflected in step two of that method.

THE IMPACT OF SARBANES-OXLEY

The following letter, written for members of the AICPA Consulting Services Section, discusses how the new legislation may affect providers of expert and litigation and dispute resolution services.

Dear Consulting Services Section Member:

The accounting profession faces many significant challenges and opportunities with the recent enactment of the Sarbanes-Oxley Act of 2002. Many provisions of this Act will redefine the way in which CPAs serve their publicly traded audit clients. The AICPA recognizes that many of our Consulting Services Section members will not be directly impacted by the Act because they do not provide services to publicly traded audit clients. Nonetheless, we felt it was important to share with you the provisions of the Act because:

1. Many CPA consulting professionals and their firms do serve public companies.
2. The Act may very well influence other federal or state legislation and rule changes that could extend beyond public companies.

THE SARBANES-OXLEY ACT OF 2002

The most significant provision of the Act that has an impact on CPA consultants is the prohibition on certain non-audit services provided to publicly traded audit clients. Also, all non-audit services that are not expressly prohibited must receive advance approval from the client's audit committee. The remaining provisions affecting CPA consultants relate to disclosure of non-audit related fees.

Provisions of the Act Affecting Firms that Audit Public Companies

The Act has a number of provisions relating to the offering of non-audit services to audit clients. How those services are defined and interpreted could be important for members of the Consulting Services Section.

The Act specifically makes "unlawful" the delivery of the following "non-audit" services to publicly traded audit clients:

- Bookkeeping or other services related to the accounting records or financial statements of the audit client.
- Financial information systems design and implementation.
- Appraisal or valuation services, fairness opinions, or contribution-in-kind reports.
- Actuarial services.
- Internal audit outsourcing services.
- Management functions or human resources.
- Broker or dealer, investment adviser, or investment banking services.
- Legal services and expert services unrelated to the audit.
- Any other service that the Public Company Accounting Oversight Board determines, by regulation, is impermissible.

Non-audit services are defined as those professional services provided to a publicly traded audit client by a registered public accounting firm, other than those provided to the client in connection with an audit or a review of the financial statements of the client.

At this time, we cannot determine if the prohibitions will extend to the consulting services that CPAs provide to executives or employees of publicly traded audit clients. It is difficult to predict the eventual impact of this provision because much of this will not be addressed until regulations are issued or through judicial proceedings. However, the Senate committee reports provide us with some background on the creation of the list of prohibited services.

In particular, the Senate Committee on Banking, Housing, and Urban Affairs, Report 107-205, provides us with some insights into the drafting of the list of prohibited non-audit services. The report states, "The intention of this provision is to draw a clear line around a limited list of non-audit services that accounting firms may not provide to public company audit clients because their doing so creates a fundamental conflict of interest for the accounting firms." Further, "The accounting firm should not act as an advocate of the audit client, which would be involved in providing legal and expert services to an audit client in legal, administrative, or regulatory proceedings, or serving as a broker-dealer, investment adviser, or investment banker to an audit client, which places the auditor in the role of promoting a client's stock or other interests." The report specifies, "The purpose [of the prohibition on certain non-audit services] is to assure the independence of the audit, not to put an end to the provision of non-audit services by accounting firms."

The Board may, on a case by case basis, exempt any person, issuer, public accounting firm, or transaction from the list of prohibited services, but also retains the power to issue regulations to expand the list of prohibited non-audit services. It is also important to note the Act does not prohibit CPAs from providing consulting services to non-audit clients.

Expert Services

The Act prohibits providing "expert" services to audit clients. Since the Act does not specifically define "expert services", the term *expert* raises many questions. This could have an impact on other consulting and advisory services such as performance measurement services in

addition to litigation and valuation services. During the implementation phase of the Act, the AICPA Litigation and Dispute Resolution Subcommittee, the Business Valuation Subcommittee, the Performance Views Task Force, and the Consulting Services Executive Committee will work with AICPA leadership to describe the potential issues and suggest solutions.

Implications for Litigation and Dispute Resolution Services

While the above list is clear on the consulting services that CPAs cannot provide to their public company audit clients, there are increased services that are likely to be requested of CPAs who perform litigation and dispute resolution services. These services may be performed for either plaintiffs or defendants and can be performed for companies to provide risk assessments that may drive enterprise change. Some key changes that may have the greatest impact include:

- Increased investigative work in connection with a) CEO and CFO certifications, b) loans to executive officers or directors, c) disclosures of material off balance sheet transactions, arrangements, and obligations, and d) CEO and CFO disclosures of internal control deficiencies and employee fraud.
- Quantification of CEO and CFO compensation and profits if a company is required to restate its financial statement results.
- Consulting with Boards of Directors and Audit Committees. The forensic CPA can educate, investigate and direct implementation of controls and reporting mechanisms to increase such groups' ability to perform required corporate governance.

Advance Approval Requirement

All non-audit services that are not expressly prohibited under the Act must be approved in advance by the audit committee. The approval-in-advance requirement is generally waived when the services were not recognized by the issuer at the time of the engagement to be non-audit services, total fees received during the year from all non-audit services are less than 5% of the total fees received from the audit client, and the services are brought to the attention of and approved by the audit committee prior to the completion of the audit. The audit committee's approval of all non-audit services must be disclosed to investors in regular SEC filings.

Disclosure of Fees

As part of the registration process required by the Act, CPA firms must disclose the annual non-audit service fees received from each publicly traded audit client.

CASCADE EFFECT BEYOND PUBLIC COMPANIES

Of particular concern is the cascade effect the scope of service restrictions of the Act could have on the CPA consultant. The new law may become the template for similar federal and state legislative and rule changes that would also directly affect both non-publicly traded companies and the CPAs who provide consulting services to them.

Shortly following the President's signing of the Act into law, several states began moving forward with legislation that would result in additional burdens for CPAs. The AICPA and state CPA societies are monitoring this situation closely and will continue to keep you informed.

The AICPA will continue to monitor and update you on legislative activities that affect the accounting profession. We are working with state CPA societies and various legislative and regulatory agencies to ensure our concerns and suggestions are addressed in current and future legislation and rule making. We encourage you to contact your legislative representatives, your state society and the AICPA concerning any current or proposed legislation that may affect CPAs and CPA consultants. If you have any close contacts in your state houses of legislature, you may wish to talk with them to help them understand the impact of this cascade effect on privately owned businesses.

You can view the recent AICPA News Alert on the Sarbanes-Oxley Act at www.aicpa.org/info/aicpa_update_7.htm. Members who have questions about the new law and its impact on their firm or company, should call 866-265-1977. The hotline will be staffed Monday through Friday for the remainder of 2002. You may also send questions or concerns to the Consulting Services Membership Section at mcs@aicpa.org.

The summary of the Act serves as a general outline of the issues that may impact the CPA consultant and should not be relied upon for technical interpretation.

Yours truly,

Dominic A. Cingoranelli, CPA, CMC
Chair, Consulting Services Executive Committee

J. Louis Matherne, CPA
Director, Business Assurance & Advisory Services

Editor's note: For a list of states in which accounting reform legislation has been proposed, along with a list of other business-related legislation, access www.aicpa.org/download/info/State_Accounting_Reform.doc.

EXPERT RESPONSE

Concerning the article "Applying the Income Approach in Quantifying Premiums and Minority Discounts" (Summer 2002 *CPA Expert*). The author has an interesting method in using minority and control income capitalization approaches to flesh out the reasonableness of a control premium based upon Mergerstat data. However, the illustration of it recalls some scary ghosts of valuation-past.

At least in my estimation, GAAP earnings are rarely a meaningful measure of a company's future economic benefits. Certainly, we have seen all too much evidence of the manipulation in earnings recently. Given the vast array of accounting policies available to companies and the even more vast interpretations of those policies, comparing the hypothetical S Corp's earnings in the article to guideline companies' earnings is more likely than not an exercise in futility. That is why most valuators focus on cash flow.

More problematic is the illustration in "Table 3: Calculation of Value Estimates," which illustrates a variation on the Revenue Ruling 59-60 weighted average of prior years' earnings, a widely debunked valuation method in my experience. The earnings in Table 1 are inconsistent with the author's earlier contention that "Since the company's financial and market conditions have remained fairly stable...we feel satisfied relying on historical data, rather than projected future earnings." Minority Earnings in Table 1 have grown from $1,553,100 to $1,990,200 in the five years illustrated! This is "fairly stable?" Earnings grew at an annual rate of 26.6% from 1998 to 1999. What could possibly be the rationale for weighting at 10% the five-year-old earnings data of $1,553,100 when the most recent year is $1,990,200, 28% higher? The example does not offer evidence that the five years have a constant growth rate or a discernable likely growth rate, a prerequisite for use of the capitalization of earnings method applied to historical earnings.

Five-year-old data is usually less than meaningless; it is misleading. Valuation is and always will be about *future* cash flow. Ibbotson bases its risk premia on cash flow. It is not about historical earnings, and certainly not about weighted averages. I believe we do a disservice to the valuation community when we use such examples to explain an otherwise interesting idea.

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